

**CLAIMS**

What is claimed is:

5                   1. A method comprising:  
                    replacing at least one portion of binary image data with at least one  
other portion of the binary image data;  
                    compressing the binary image data; and  
                    determining whether the compressed binary image data having at  
least one replaced portion satisfies a target compression ratio.

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                    2. The method as set forth in claim 1 further comprising  
repeating the replacing, the compressing and the determining at least one time.

                    3. The method as set forth in claim 2 wherein the replacing at  
15                   least one portion of binary image data is performed on successively larger portions  
of the binary image data.

                    4. The method as set forth in claim 1 wherein the replacing at  
least one portion of binary image data with at least one other portion of the binary  
20                   image data further comprises:

                        identifying at least one segment within the binary image data,  
wherein each segment comprises a plurality of bits; and  
                        selecting at least one of the bits in the at least one segment; and  
                        changing at least one first value of at least one of the bits in the  
25                   at least one segment to match at least one second value of the at least one selected  
bit in the segment.

                    5. The method as set forth in claim 4 wherein the at least one  
segment comprises a plurality of segments and at least one of the plurality of  
30                   segments is oriented along a first axis in the image data, and at least one other of  
the plurality of segments is oriented along a second axis in the image data.

6. The method as set forth in claim 1 wherein the compressing is accomplished using a lossless compression algorithm.

7. A system comprising:  
5 a replacement system that replaces at least one portion of binary image data with at least one other portion of the binary image data;  
a compression system that compresses the binary image data; and  
an assessment system that determines whether the compressed binary image data having at least one replaced portion satisfies a target  
10 compression ratio.

8. The system as set forth in claim 7 wherein the replacement system replaces successively larger portions of the binary image data, the compression system compresses successively larger portions of the binary image  
15 data and the assessment system assesses successively larger portions of the binary image data.

9. The system as set forth in claim 7 wherein the replacement system that replaces further comprises:  
20 an identification system that identifies at least one segment within the binary image data, wherein each segment comprises a plurality of bits;  
a selection system that selects at least one of the bits in the at least one segment; and  
a changing system that changes at least one first value of at least  
25 one of the bits in the at least one segment to match at least one second value of the at least one selected bit in the segment.

10. The system as set forth in claim 9 wherein the at least one segment comprises a plurality of segments and at least one of the plurality of  
30 segments is oriented along a first axis in the image data and at least one other of the plurality of segments is oriented along a second axis in the image data.

11. The compression system as set forth in claim 7 wherein the compression system uses a lossless compression algorithm.

12. A computer readable medium having stored instructions for achieving a target compression ratio for a binary image which, when executed by a processor, causes the processor to perform steps comprising:

replacing at least one portion of binary image data with at least one other portion of the binary image data;

compressing the binary image data; and

determining whether the compressed binary image data having at least one replaced portion satisfies a target compression ratio.

13. The medium as set forth in claim 12 further comprising repeating the replacing, the compressing and the determining at least one time.

14. The medium as set forth in claim 13 wherein the replacing at least one portion of binary image data is performed on successively larger portions of the binary image data.

15. The medium as set forth in claim 12 wherein the replacing at least one portion of binary image data with at least one other portion of the binary image data further comprises:

identifying at least one segment within the binary image data, wherein each segment comprises a plurality of bits; and

selecting at least one of the bits in the at least one segment; and

changing at least one first value of at least one of the bits in the at least one segment to match at least one second value of the at least one selected bit in the segment.

16. The medium as set forth in claim 15 wherein the at least one segment is oriented along a first axis and a second axis in the image data.

17. The medium as set forth in claim 12 wherein the compressing is accomplished using a lossless compression algorithm.